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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,753	12/04/2003	Johann Meseth	TER-02P0020	7612

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EXAMINER	
GREENE, DANIEL LAWSON	

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,753	MESETH, JOHANN	
	Examiner	Art Unit	
	Daniel L. Greene Jr.	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/12/05, with respect to the drawings have been fully considered and are persuasive. The objection in this regard has been withdrawn.

2. Applicant's arguments, see pages 5-7, filed 9/12/05, with respect to the U.S.C. 112 rejections in sections 6-8 have been fully considered and are persuasive accordingly the objections and rejections in this regard have been withdrawn.

3. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no proper antecedent basis for all terms present. See for example "a vertical line", "a tube section", "an upper side" in claim 1, etc.

Claim Rejections - 35 USC § 103

5. Claims 1, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian.

Krebs clearly discloses applicant's invention as claimed except for the specific geometry of the outlet nozzle.

Garabedian column 6, lines 11-15 teach is it old and advantageous to cut the angle of the outlet nozzle at a 45 degree angle for the benefit of eliminating major hydrodynamic pressure disturbances due to a chugging type of steam condensation.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the outlet nozzle of Krebs with a 45 degree angle thereby providing an outlet nozzle formed with a lower side longer than the upper side, for the benefit of eliminating major hydrodynamic pressure disturbances due to a chugging type of steam condensation as shown to be old and advantageous by the teachings of Garabedian above.

Additionally, it would have also been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the outlet nozzle in order to achieve a desired result, i.e. less chugging, as it is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian as applied to claims 1 and 5 above and further in view of either Introduction to Fluid Mechanics second edition to John et al. or Piping Handbook Seventh edition to Nayyer.

The combination of Krebs in view of Garabedian discloses applicant's invention as claimed, however there is no express disclosure of the specific angle of the elbow of the condensation tube.

Both John et al. (ppB.374, C.494 and C.495) and Nayyer (pp 174) teach it is old and advantageous to minimize the curvature of a pipe or elbow for the benefit of minimizing friction and subsequent losses in the flow of liquid in the system. John et al. and Nayyer disclose fundamentals behind standard fluid flow in pipes, systems, etc. that are considered to be basic knowledge to those in the nuclear containment art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian to those angles suggested in claims 3 and 4 for the benefits of decreasing the loss coefficient and minimizing pressure losses as taught to be old and advantageous by either John et al. or Nayyer.

Additionally it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian within the range suggested by claims 3

and 4 to achieve a desired result as it is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. SWR 1000 is a document listed on the instant inventors 9/5/2000 IDS for application 09/655,091. This document is dated 2/96 and page 19 also shows Krebs Figure 4.

b. Foreign Priority Document "I" listed in the instant applications 9/17/04 IDS shows condensation tubes immersed obliquely in the cooling liquid of a condensation chamber.

c. Onizuka et al. has a PCT publication date of 2/24/2000 and also shows tubes immersed obliquely in a liquid.

d. Rohleder et al also shows tubes immersed obliquely in a liquid.

e. Conrads et al. shows oblique angle penetrations.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Greene Jr. whose telephone number is (571) 272-6876. The examiner can normally be reached on Mon-Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DIG
2005-11-17

JACK KEITH
SUPERVISORY PATENT EXAMINER